



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,321	12/08/2003	Toshiaki Fukushima	JP920030131US2	2430

56687 7590 11/24/2006
DRIGGS, HOGG & FRY CO., L.P.A.
38500 CHARDON ROAD
DEPT. LEN
WILLOUGHBY HILLS, OH 44094

EXAMINER

VIDWAN, JASJIT S

ART UNIT PAPER NUMBER

2182

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/730,321	FUKUSHIMA ET AL.	
	Examiner	Art Unit	
	Jasjit S. Vidwan	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-17, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-17, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-6, 8-17 and 19-20 are pending

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 15, 17 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1, 15, 17 and 19 require the limitation wherein the transfer rate setting unit set a data transfer rate value solely on the read attributes of the memory module. However, there is no support in the specification for the above limitation. In fact on the contrary, Applicant's submitted specification on page 6 states that "*upper limit temperature acquisition unit 110 may acquire the upper limit temperature based on an entry from a user, or may acquire the upper limit temperature from another device through a network and the communication interface 1030.*" Furthermore, Applicant states in the specification on page 6, "*the transfer rate setting unit 130 acquires, from a setting value candidate database a data transfer rate setting value for maintaining a temperature of the memory module.*" Therefore, in light of above reasoning it is the Examiner's position that Applicant's amended limitation of "data transfer rates be based solely on the read attributes of the memory module is unfounded and not supported by specification.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1, 15, 17 and 19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant claims and argues that data transfer rate is determined solely on the memory

attributes without any calculations. However, it is unclear to the Examiner how a data transfer rate could be set without any calculations and solely based on memory attributes especially since Applicant ^{discloses} admits in his specification (**Page 19, Paragraph 1**) of requiring calculations in setting transfer rate. Furthermore, it seems that Applicant's claim of "solely based on read attributes of memory module" is incorrect as Applicant admits in specification (**Page 6, Paragraph 3**) that in addition to memory module attributes, the transfer rate setting unit (130) also takes into account the acquired memory attachment position information in the calculations. For the purpose of timely examination of the application, Examiner will construe the limitation to determining transfer rate based on memory module attributes.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 8-17 and 19-20 rejected under 35 U.S.C. 102(b) as being anticipated by Pollard, II et al, U.S. Patent No: 7,050,959 [**herein after Pollard**].

3. **As per Claim 1, 15, 17 and 19**, Pollard teaches a method for causing a processing unit to function as a setting device for setting a memory control device which accesses a memory module having a plurality of memory cards implementing a memory device therein, the method comprising the steps of:

(a) Providing a memory attribute information acquisition unit card acquiring memory attribute information therein indicating attributes of the memory module from an attribute memory provided in the memory module [**Col. 5, Lines 26-36**];

(b) Providing a transfer rate-setting unit connected to the memory attributes information acquisition unit [**Fig. 1, Element 110, "BIOS"**] and determining, based on a plurality of memory attributes [**Col. 3, Lines 40-43**], a data transfer rate setting value as a rate of an upper limit value of a data transfer rate (maximum sustainable power) relative to a

maximum data transfer rate [Col. 3, Lines 43-52 & Col. 4, Lines 32-45, "Maximum sustainable power represents upper limit value of the data transfer"] supplying data rate transfer setting the determined data transfer rate setting value in the memory control device [Col. 5, Lines 1-4], the upper limit value of the data transfer rate being at which the memory control device accesses the memory module [Col. 3, Lines 43-52, "Maximum sustainable power"], and the maximum data transfer rate being at which the memory control device is able to access the memory module [Col. 4, Lines 46-49, "Maximum threshold bandwidth"].

4. As per Claims 2, Pollard teaches a method wherein the transfer rate setting unit determines an upper limit value of a number of memory accesses issued by the memory control device per unit time as the data transfer rate setting value based on the memory attribute information, and sets the determined upper limit value in the memory control device [Col. 5, Lines 9-16, "Read/write requests"].

5. As per Claim 3, Pollard teaches a method wherein the transfer rate setting unit determines a value indicating a number of idle cycles while the memory control device is not performing memory accesses as the data transfer rate setting value based on the memory attribute information, each idle cycle being inserted between one cycle while the memory control device is performing a memory access and the other to set the determined value in the memory control device [Col. 5, Lines 16-24].

6. As per Claim 4 and 20, Pollard teaches a method wherein the memory module generates heat by being accessed by the memory control device [Col. 1, Lines 15-21] and the transfer rate setting unit determines a data transfer rate setting value for maintaining a temperature of the memory module at a predetermined upper limit temperature or lower based on the memory attribute information, and sets the determined data transfer rate setting value in the memory control device [Col. 5, Lines 4-9].

7. As per Claim 5, Pollard teaches a method wherein, as setting for maintaining the memory module at the upper limit temperature or lower, the transfer rate setting unit determines, as the data transfer rate setting value, a smaller value in a case where a heating value of the memory module is larger as compared with a value in a case where the heating value of the memory module is smaller, and sets the determined data transfer rate setting in the memory control device [Col. 5, Lines 4-9].

8. **As per Claim 6**, Pollard teaches a method further comprising an upper limit temperature acquisition unit for acquiring an upper limit temperature at which the memory module is operated, wherein the transfer rate setting unit determines a data transfer rate setting value for maintaining the temperature of the memory module at the upper limit temperature or lower based on the memory attribute information, and sets the determined data transfer rate setting value in the memory control device **[Col. 4, Lines 32-37]**.

9. **As per Claim 8**, Pollard teaches a method wherein:

The setting device is a device for setting the data transfer rates for a plurality of the memory modules **[Col. 3, Lines 58-60]** attached into an information processing apparatus **[Fig. 1, Element 110]**.

The memory attribute information acquisition unit acquires the memory attribute information of the plurality of memory modules for each thereof in association therewith **[Col. 5, Lines 26-36]**.

The transfer rate setting unit creates individual setting values as data transfer rate setting values set when the memory modules are singly attached into the information processing apparatus for each of the plurality of memory modules based on the memory attribute information of the memory modules **[Col. 3, Line 60 - Col. 4, Line 4]**, and determines a value between maximum and minimum values of the individual setting values, each of which is created so as to correspond to each of the plurality of memory modules, as a data transfer rate setting value for the plurality of memory modules **[Col. 4, Lines 33-40]**.

10. **As per Claim 9**, Pollard teaches a method wherein:

The setting device is a device for setting the data transfer rates for a plurality of the memory modules **[Col. 3, Lines 58-60]** attached into an information processing apparatus **[Fig. 1, Element 110]**.

The memory attribute information acquisition unit acquires the memory attribute information of the plurality of memory modules for each thereof in association therewith **[Col. 5, Lines 26-36]**.

The transfer rate setting unit creates individual setting values as data transfer rate setting values set when the memory modules are singly attached into the information processing apparatus for each of the plurality of memory modules based on the memory attribute information of the memory modules **[Col. 3, Line 60 - Col. 4, Line 4]**, and determines a minimum value of the individual setting values, each of

which is created so as to correspond to each of the plurality of memory modules, as a data transfer rate setting value for the plurality of memory modules [Col. 5, Lines 46-55].

11. **As per Claim 10**, Pollard teaches a method wherein the memory attribute information acquisition unit acquires type identification information identifying a type of any of the memory module and the memory device as the memory attribute information [Col. 3, Lines 19-30], and the transfer rate setting unit determines the data transfer rate setting value in accordance with the type identification information, and sets the determined data transfer rate setting value in the memory control device [Col. 4, Lines 33-40].

12. **As per Claim 11**, Pollard teaches method wherein the transfer rate setting unit determines the data transfer rate setting value in accordance with the manufacturer identification information, and sets the determined data transfer rate setting value in the memory control device [Col. 4, Lines 54-67].

13. **As per Claim 12**, Pollard teaches a method wherein the memory attribute information acquisition unit acquires number-of-devices information indicating a number of the memory devices implemented in the memory module as the memory attribute information [Col. 5, Lines 26-36].

14. **As per Claim 13**, Pollard teaches a method wherein the memory module includes a board implementing at least one memory device thereon [Col. 3, Lines 58-66], memory attribute information acquisition unit acquires, as the memory module is a memory module of single-sided implementation, which implements the memory device on one side of the board or a memory module of double-sided implementation, which implements the memory devices on both sides of the board [Col. 3, Lines 30-40]. The transfer rate setting unit determines the data transfer rate setting value in accordance with the memory bank information, and sets the determined data transfer rate setting value in the memory control device [Col. 5, Lines 1-9].

15. **As per Claim 14**, Pollard teaches a method wherein the transfer rate setting unit determines, as the data transfer rate setting value, a smaller value in a case where the memory bank information indicates the memory module of the double-sided implementation as compared with a value in a case where the memory bank information indicates the memory module of the single-sided implementation,

and sets the determined data transfer rate setting value in the memory control device [Col. 4, Lines 33-40].

16. **As per Claim 16**, Pollard teaches a computer readable recording medium recording the method [Col. 8, Lines 8-12].

Response to Arguments

17. Applicant's arguments filed 9/8/2006 have been fully considered but they are not persuasive. Applicant argues that as amended, prior art fails to teach data transfer rate be based solely on the read attributes of the memory module without any calculations.

As per above Argument, Examiner disagrees. Applicant's argument regarding data transfer rate setting being done without any calculations (Page 13 of arguments) is invalid, as the said limitation is not recited in the claimed invention. Moreover, Applicant's submitted specification (page 19, paragraph 1) clearly discusses the need for calculating the data transfer rate. In addition, in reference to "data transfer rates be based solely on the read attributes of the memory module" are also unfounded as Applicant's specification (**Page 6, Paragraph 3**) teaches that in addition to memory module attributes, the transfer rate setting unit (130) also takes into account the acquired memory attachment position information in the calculations. Therefore, in light of above points, it is the position of the Examiner that prior art of record still reads on the amended claims

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2182


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasjit S. Vidwan whose telephone number is (571) 272-7936. The examiner can normally be reached on 8am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KIM HUYNH can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSV
11/16/2006



KIM HUYNH
SUPERVISORY PATENT EXAMINER

11/16/06